

## **Appendix A. Draft Text of the General Order**

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**STATE WATER RESOURCES CONTROL BOARD  
WATER QUALITY ORDER NO. 2000-\_\_\_-DWQ**

**GENERAL WASTE DISCHARGE REQUIREMENTS FOR THE  
DISCHARGE OF BIOSOLIDS TO LAND FOR USE AS A SOIL AMENDMENT IN  
AGRICULTURAL, SILVICULTURAL, HORTICULTURAL, AND LAND  
RECLAMATION ACTIVITIES (GENERAL ORDER)**

The State Water Resources Control Board (hereinafter referred to as the SWRCB) finds that:

1. Applications for the use of treated municipal sewage sludge meeting the requirements specified in Part 503 in Title 40 of the Code of Federal Regulations (CFR) (hereinafter referred to as biosolids) as a soil amendment have been received and waste discharge requirements (WDRs) have been issued by several of the nine Regional Water Quality Control Boards (RWQCBs). Section 13274 of the California Water Code (CWC) requires the SWRCB or RWQCBs to prescribe General WDRs for the discharge of biosolids used as a soil amendment. This General Order is intended to satisfy the requirements of CWC section 13274 and is intended for discharges of biosolids for use as a soil amendment. This General Order assists in streamlining the regulatory process for such discharges but may not be appropriate for all sites using biosolids due to particular site-specific conditions or locations. Such sites are not precluded from being issued individual WDRs. For the purposes of this General Order, biosolids do not include septage. Biosolids material applicable for coverage under this General Order is as described below:
  - a. All Class A biosolids not meeting the requirements contained in Table 3 of 40 CFR Part 503.13 and Class B biosolids that are land applied for agricultural, silvicultural, horticultural, and land reclamation activities;
  - b. All Exceptional Quality (EQ) biosolids-derived mixtures consisting of more than or equal to 50 percent biosolids (dry weight) applied at more than 10 dry-tons per acre per year for use as a soil amendment to continuous fields/plots greater than 20 acres for agricultural, silvicultural, horticultural, and land reclamation activities and where the said fields/plots are owned or operated by the same person, company, or partnership;
  - c. All EQ biosolids-derived mixtures consisting of 50 percent biosolids or less (dry weight) applied at more than 20 dry-tons per acre per year for use as a soil amendment to continuous fields/plots greater than 20 acres for agricultural, silvicultural, horticultural, and land reclamation activities and where the said fields/plots are owned or operated by the same person, company, or partnership.

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2. EQ biosolids may not necessitate regulation in the future. However, it is believed that large scale uses currently require oversight regardless of the actual threat to water quality while done at agronomic rates and using best management practices. Accordingly, this General Order can be applied to such sites to ensure that biosolids are being properly used and are not used in an activity of unregulated dumping. This regulatory tool may be used to regulate material that is land applied at a high loading rate in order to discourage poor biosolids management and to reduce risk to the public and the environment.
3. Within this General Order, the following terms are described as follows:
  - a. Agriculture: The practice, science, or art of using the soil for the production of crops and/or raising livestock for human use.
  - b. Agricultural Mineral: Any material containing nitrogen, available phosphoric acid, or soluble potash, singly or in combination, in amounts less than 5 percent or any substance containing essential secondary nutrients or micronutrients that is distributed for use in agriculture, silviculture, horticulture, and land reclamation activities for the purpose of promoting plant growth.
  - c. Agronomic Rate: The nitrogen requirements of a plant needed for optimal growth and production, as cited in professional publications for California by the County Agricultural Commissioner or recommended by a Certified Agronomist or Certified Soil Scientist.
  - d. Applier: Person, group of persons, or company that applies biosolids for use as a soil amendment.
  - e. Arid: Arid lands are those areas where the longterm annual average rainfall is below 250 millimeters (less than 10 inches).
  - f. Biosolids: Sewage sludge that has been treated and tested and shown to be capable of being beneficially and legally used as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities as specified under 40 CFR Part 503.
  - g. Buffer Zones: An area of land that provides a separation distance between the land application site and an area of concern.
  - h. Class A Biosolids: Biosolids meeting the vector attraction, and meeting pollution concentration limits specified in 40 CFR Part 503 and pathogen reduction standards specified in 40 CFR Part 503.32(a).

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- i. Class B Biosolids: Biosolids meeting the vector attraction and meeting pollution concentration limits specified in 40 CFR Part 503 and pathogen reduction standards specified in 40 CFR Part 503.32(b).
- j. Depth to Ground Water: The distance from the land surface elevation to the seasonal high water table.
- k. Domestic Water Supply Well: A well that provides water used for human consumption.
- l. EQ Biosolids: Biosolids which meet metals standards, Class A pathogen reduction standards, and vector attraction reduction standards contained in 40 CFR Part 503.13 (Table 3), 40 CFR Part 503.32, and 40 CFR Part 503.33, respectively.
- m. Fertilizing Material: Biosolids with 5 percent or more of nitrogen, available phosphoric acid, or soluble potash, singly or in combination.
- n. Generator: Municipal Wastewater Treatment Facility or Sewage Sludge Treatment Facility.
- o. Grower: Person or entity primarily responsible for planting, maintaining, and harvesting or allowing the use of crops and/or range land for domestic animal or human use.
- p. Gully erosion: Erosion cut by a concentrated but intermittent flow of water usually during and immediately following heavy rains or after ice/snow melt. A gully generally is an obstacle to wheeled vehicles and too deep (e.g., > 0.5 meter) to be obliterated by ordinary tillage.
- q. High Potential for Public Exposure Areas: Land located within one-half mile of educational facilities, facilities designated for recreational activities other than hunting, fishing, or wildlife conservation, places of public assembly, hospitals, or similar sensitive receptors.
- r. Horticulture: The practice, science, or art of cultivating the soil to produce fruit, vegetables, or ornamental plants for human use.
- s. Key Operating Personnel: Those individuals responsible for the oversight of daily operations, management decisions, and planning of biosolids land application projects.
- t. Low Potential for Public Exposure Areas: Land not meeting the definition of High Potential for Public Exposure Areas.
- u. Label: The display of all written, printed, or graphic matter on the immediate container of, or a statement including the guaranteed analysis, accompanying fertilizing material as required by the California Department of Food and Agriculture.

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- v. Land Reclamation: The practice of revitalizing or restoring lands that are damaged from past or present human land use practices.
- w. Long-Term Storage Facility: Site which holds biosolids for more than seven days consecutively.
- x. Micronutrients: Refers to boron, chloride, cobalt, copper, iron, manganese, molybdenum, sodium, or zinc.
- y. Municipal Wastewater Treatment Facilities (treatment facilities): Facilities designed to collect and treat wastewater generated from primarily domestic sources for environmentally safe reuse or disposal.
- z. Notice of Applicability: Written notice that a biosolids land application site is required to comply with the provisions of this General Order and that applications according to the General Order may commence.
- aa. Notice of Intent (NOI): Application for coverage under this General Order, as attached. The NOI is also a notification form for the public and interested parties for this General Order.
- ab. Notice of Termination (NOT): Request form to discontinue coverage of this General Order.
- ac. Nuisance: Nuisance means anything which meets all of the following requirements:
  - (1) Is injurious to health, or is indecent and offensive to the sense, or is an obstruction to the free use of property so as to interfere with the comfortable enjoyment of life and property.
  - (2) Affects at the same time an entire community or neighborhood or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
  - (3) Occurs during, or as a result of, the treatment or disposal of wastes.
- ad. Pathogens: Disease causing agents including helminths, bacteria, viruses, and protozoa.
- ae. Pathogen Reduction: Process used to destroy pathogenic material contained in sewage sludge.
- af. Pollution: Means an alteration of the quality of the waters of the State by waste to a degree which unreasonably affects either of the following:

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- (1) The waters for beneficial uses.
  - (2) Facilities which serve these beneficial uses.
  - ag. Secondary Nutrients: The elements of calcium, magnesium, and sulfur.
  - ah. Septage: Waste material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar wastewater handling device that has not passed through a municipal wastewater treatment facility.
  - ai. Sewage Sludge: The solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a municipal wastewater treatment facility. Sewage sludge includes solids removed or used during primary, secondary, or advanced wastewater treatment processes. Sewage sludge does not include grit or screening material generated during preliminary treatment of domestic sewage at a municipal wastewater treatment facility.
  - aj. Short-Term Storage: Biosolids storage sites used as a temporary holding facility for less than or equal to seven days.
  - ak. Silviculture: The practice, science, or art of managing, developing, and harvesting forests and trees for human use.
  - al. Soil Amendment: Applications of a fertilizing material or agricultural mineral for the purpose of promoting utilization by plants and other living organisms with the goal of a net gain in soil productivity.
  - am. Staging Area: Area used to hold biosolids for less than 48 hours prior to use for the specified activity listed in the NOI.
  - an. Tailwater: Excess water from crop irrigation resulting in a discharge off site to a surface water body.
  - ao. Vector Attraction: Characteristic of biosolids that attracts potential pathogen transmitters such as flies, rodents, and other animals or organisms.
  - ap. Water-saturated soil: Water content of the soil such that any further addition of water will result in runoff, standing water, or percolation of water through the displacement of existing soil water.
4. Treatment facilities serve urban and suburban population areas by collecting and treating municipal wastewater and reusing or disposing of wastewater effluent. While serving the public in this manner, significant amounts of sewage sludge are generated. This material is typically further

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treated (stabilized) and dewatered and can be managed using a variety of options including: (a) disposal in a sanitary landfill, (b) incineration, (c) placement into a landfill dedicated for this purpose, (d) use as daily landfill cover, and (e) use in land application operations, including reclamation, horticulture, agriculture, and silviculture.

5. Particularly in urban areas, industrial sources discharge into wastewater collection systems. Many of these discharges are regulated by pretreatment programs implemented pursuant to 40 CFR Part 403. These programs restrict industries from discharging toxic pollutants in concentrations creating concerns for the treatment facilities.
6. As a result of domestic and industrial uses, pollutants enter the collection system of treatment facilities. The majority of the pollutant load treated at the treatment facilities is organic matter. This material is removed through flotation and/or settling or is converted to biological solids and then removed through settling prior to discharge. The settled material is then further treated to stabilize organic matter which constitutes the majority of the domestic sewage sludge. Metals from domestic and industrial sources are also present in the waste stream at the treatment facility. These pollutants are removed from the waste stream and concentrated in the sewage sludge. Organic chemicals can also be present from domestic and industrial uses of water. The fate of these pollutants is variable. Some are removed and destroyed through physical and biological processes at the treatment facility. Others may concentrate in the sewage sludge. Some pass through the treatment facilities unchanged and are subsequently discharged from the treatment process. A portion of the organic chemicals concentrated in the sewage sludge is degraded during sludge stabilization processes. Some organic chemicals can remain in the sewage sludge unchanged. For these reasons, testing of sewage sludge is necessary prior to it being classified as biosolids.
7. Biosolids are a source of organic matter, nitrogen, phosphorus, and micronutrients. These materials are beneficial to agriculture, silviculture, horticulture, and land reclamation activities and they improve agricultural productivity. More specifically, the benefits derived from biosolids used as a soil amendment are as follows:
  - a. Nitrogen is a basic nutrient for plant growth. In biosolids, it is present in the forms of ammonia, nitrates, and organic nitrogen at concentrations from two to 10 percent by weight on a dry weight basis. The ammonia and nitrate forms of nitrogen are immediately available for plant usage. Organic nitrogen is released slowly (mineralized) over many months, providing a continuous supply of nitrogen for crops and minimizing the potential for movement of nitrogen to the ground water. The nitrogen available for plant usage at any given time is the sum of the ammonia, nitrate, and mineralized organic nitrogen.
  - b. Phosphorus is a basic nutrient for plant growth and is present in all biosolids in varying concentrations.

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- c. Micronutrients, including a variety of salts and metals, are necessary for plant growth and are present in biosolids in varying amounts.
  - d. The addition of biosolids to soils can also be beneficial by enhancing soil structure, increasing water retention capability, promoting soil aggregation, and reducing the bulk density. Organic matter assists in maintaining soil pores which allow water and air to pass through the soil medium. Such pores can be lost at sites under continuous cultivation and they are critical in maintaining an aerobic environment within the plant root zone.
  - e. Organic matter helps soils retain water. Additional water retention can reduce the need for frequent water applications and can facilitate water conservation.
  - f. Liming agents are available when the biosolids have been chemically stabilized with lime. Liming agents increase soil pH and can improve the permeability of the soils. Higher pH soils have a greater propensity to bind most heavy metals, decreasing the chance of the metals migrating to the ground water.
8. Biosolids have the following characteristics which can create water quality and public health problems if improperly treated, managed, and regulated during use as a soil amendment:
- a. Pathogens can be present. Unless the biosolids are specially treated or disinfected to destroy pathogens, significant concentrations of bacteria, viruses, and parasites can remain. Public health problems can be prevented with appropriate control over public access to the application areas and restrictions on the type and use of crops grown on the application sites. Buffer zones around water supply wells, surface water drainage courses, and public areas are designated to prevent transmission of pathogens to the public.
  - b. Heavy metals will be present. If heavy metals are over-applied to a field, they can cause ground water pollution, toxicity to plants, toxicity/adverse effects to soil microorganisms, or buildup in the plant tissues. A buildup of metals in plant tissues may allow transmission of the metals into the food chain which is the cause of toxicity/adverse effects to animals eating plants or animals containing elevated metals. Future cropping or other land uses could be restricted. Only some of the metals commonly found in biosolids are known to cause water quality or public health problems. Application rates for those metals have been established to avoid the problems.
  - c. Nitrogen can be over-applied, allowing a buildup of nitrogen in soils. Excess nitrogen will eventually be converted to the nitrate form and it can migrate to ground water. Excess nitrate in the ground water can result in the exceedance of drinking water standards and a public health threat. Nitrogen over-application can be prevented by biosolids application at an agronomic rate, that is, by matching the application rate of the nitrogen to the nitrogen usage rate of the crops and to soil permeability and soil retention capability.



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- d. Odor and insect nuisances can be caused if the biosolids have not been adequately treated (stabilized) prior to application or if wet biosolids are allowed to remain on the ground surface for several days. Compliance with State and federal standards for stabilization of the biosolids will minimize the potential for odors and insect nuisances. Proper management at the application site will prevent odor or insect nuisances. Properly stabilized biosolids will generate limited, transient odors in the immediate vicinity of the application operations. Adequate buffer zones around residences and public areas, therefore, should be provided.
  - e. Discharge of organic matter, metals, and pathogens to surface waters can affect water quality. These effects can be prevented by controlling field runoff. The water quality threat of organic matter of biosolids origin affecting surface water is no greater than for a similar quantity of other organic soil amendments.
9. The U. S. Environmental Protection Agency (USEPA) has promulgated 40 CFR Part 503 for the use of biosolids as a soil amendment. These regulations establish ceiling concentrations for metals and pathogen and vector attraction reduction standards; management criteria for the protection of water quality and public health; and annual and cumulative discharge limitations of persistent pollutants, such as heavy metals, to land for the protection of livestock, crop, and human health and water quality protection. The requirements of 40 CFR Part 503 are based on a risk-based evaluation using 14 different pathways.
10. The National Research Council established a committee to review the methods and procedures used by the USEPA while forming the basis of the 40 CFR Part 503. The National Research Council's members are drawn from the National Academy of Sciences, National Academy of Engineering, and the Institute of Medicine. Committee members included university professors from the schools of law, science, and agriculture; a state health official; a food industry professional; a professional from a sanitation agency; and a professional consultant. After a three-year study (starting in 1993), the committee made some recommendations for improvement of the regulations and data from which they are based but also stated: "Established numerical limits on concentration levels of pollutants added to cropland by sludge are adequate to assure the safety of crops produced for human consumption." As a result of the peer review, monitoring for organic chemicals and using fecal coliform testing as a parameter for determining Class A level pathogen reductions is included in this General Order.
11. Due to the extensive work done by the USEPA, this General Order is using the 40 CFR Part 503 requirements as baseline requirements for compliance. However, this General Order is applicable to sites where biosolids are applied to land and is not intended to solely regulate the generator (unless the generator is also the landowner or land applier). The 40 CFR Part 503 requirements are only intended for and enforceable against the generator. Therefore, this General Order does not constitute compliance with 40 CFR Part 503. Since the SWRCB is not delegated with authority for the Federal Biosolids Program, the USEPA is the only authority to determine compliance with 40 CFR Part 503.

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12. Each discharger covered by this General Order shall submit an annual fee and an application fee equal to the annual fee, pursuant to CWC section 13260. The amount of the fee is currently determined by the type of order issued the threat to water quality, and complexity of the specific discharge, as detailed in Section 2200, Chapter 9, Division 3, Title 23, California Code of Regulations (CCR). Biosolids application projects greater than 40 acres are deemed as Non-Chapter 15 WDRs with a Category “II” threat to water quality rating and a Category “b” complexity rating. Biosolids projects consisting of less than 40 acres are deemed Category “III” threat to water quality rating and a Category “b” complexity rating.
13. This General Order may be periodically revised to reflect changes in federal or State laws or regulations or policies of the SWRCB or RWQCB.
14. Under CWC section 13263, the SWRCB can prescribe General WDRs for categories of discharges which involve the same or similar waste type or those which are produced by the same or similar operations.
15. This General Order shall primarily apply to both the landowner of sites using biosolids and the biosolids generator, but may also include, as determined by those involved in the operation, the individuals, or companies, transporting and placing the biosolids in the field and the land lessee in conjunction with the landowner and the generator. To obtain coverage under the General Order, a complete NOI and an appropriate fee must be submitted to the RWQCB. Once a completed application is submitted, RWQCB staff will evaluate the project to determine if it is suitable for regulation under this General Order and the corresponding California Environmental Quality Act (CEQA) document. Only after a determination of applicability is made will the discharger be issued a Notice of Applicability by the RWQCB Executive Officer. Only applicants (dischargers) who submit a complete NOI, appropriate fee, and are issued a Notice of Applicability are authorized to land apply biosolids at an agricultural, horticultural, silvicultural, or land reclamation site as a soil amendment onto the land specified in the NOI in compliance with the terms and conditions of this General Order. If it is determined that a local agency already adequately regulates the activity subject to this permit, the RWQCB may choose not to issue this General Order in order to avoid any duplicative regulation.
16. A separate NOI and filing fee must be filed for each biosolids use project to be eligible for coverage under this General Order. A separate NOI and filing fee must be filed for each landowner involved in a reuse project. Attachment A to this General Order contains an NOI form which details the minimum contents of the NOI. A single reuse project will be limited to sites comprising not more than 2,000 net acres available for application. Net acreage is the land available for application, excluding roads, surface water drainage, and required buffer areas. The sites comprising a single reuse project shall be contained within a ten-mile radius of a given location. There is no restriction on the number of NOIs which may be filed for reuse within any geographic area. A single reuse project may be a one-time application or may be repetitive applications to the same

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parcel. Filing fees are annual fees. Projects will be billed for an annual fee equaling the filing fee until the project is completed and coverage under the General Order has been terminated.

17. This General Order sets minimum standards for the use of biosolids as agricultural, horticultural, silvicultural, or reclamation site soil amendments, and it does not preempt or supersede the authority of local agencies to prohibit, restrict, or control the use of biosolids subject to their control, as allowed under current law. It is the responsibility of the discharger to make inquiry and to obtain any local governmental agency permits or authorizations prior to the application of biosolids at each site.
18. Some areas in California have been designated as unique and valuable public resources. Such areas have been defined in the State law and the CCR as jurisdictional waters or preserves or have been addressed through acts specifically intended to preserve and manage the resource. This General Order is not applicable to those areas as described below:
  - a. The Lake Tahoe Basin.
  - b. The Santa Monica Mountains Zone as defined by section 33105 of the Government Code.
  - c. The California Coastal Zone, as defined in and mapped pursuant to Public Resources Code (PRC) section 30103.
  - d. An area within one quarter mile of a wild and scenic river, as defined by PRC section 5093.5.
  - e. The Sacramento-San Joaquin Delta, as defined in CWC section 12220.
  - f. The Suisun Marsh, as defined in (PRC) section 29101.
  - g. The jurisdiction of the San Francisco Bay Conservation and Development Commission, as defined in Government Code section 66610.
  - h. The following prohibition areas contained in the Water Quality Control Plan<sup>1</sup> of the Lahontan RWQCB:
    - (1) Glenshire and Devonshire Subdivisions, Town of Truckee
    - (2) Areas southwest of Piute Creek and north of Susan River and included in Sections 21, 25, 26, 27, 28, 33, 34, 35, and 36, T30N, R11E, MDB&M

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<sup>1</sup> A detailed description of the prohibition areas can be found in the Lahontan RWQCB's Water Quality Control Plan (Basin Plan)

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- (3) Eagle Lake Basin-Spaulding Tract, Stones-Bengard Subdivision, and Eagle's Nest Summer Home Tract
  - (4) Mono-Owens Planning Area
    - (a) Rush Creek Watershed above the outlet of Grant Lake
    - (b) Mammoth Creek Watershed, including the drainage area of the community of Mammoth Lake, and the Sherwin Creek Watershed upstream of the confluence of Sherwin and Mammoth Creeks
    - (c) Inyo County Service Area No. 1
      - i. Assessment District No. 1
      - ii. Assessment District No. 2
      - iii. Rocking K Subdivision
      - iv. City of Bishop
  - (5) Antelope Valley Planning Area
    - (a) The Antelope Hydrologic Unit above an elevation of 3,500 feet
  - (6) Mojave River Planning Area
    - (a) The Silverwood Lake Watershed
    - (b) The Deep Creek Watershed above an elevation of 3,200 feet
    - (c) The Grass Valley Creek Watershed above an elevation of 3,200 feet
    - (d) Area north of State Highway 18 within the area commonly known as Apple Valley and Desert Knolls
  - (7) Hilton Creek/Crowley Lake communities
19. The biosolids applied to land under this General Order are non-hazardous decomposable wastes applied as a soil amendment pursuant to best management practices and, as such, are exempt from the requirements of Title 23, CCR, Section 2510, et seq., (Chapter 15), in accordance with Section 2511(f).
20. The construction and use of biosolids storage facilities allowed by this General Order are for short-term storage of biosolids in the event that biosolids cannot be immediately applied to the

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ground surface because of an unanticipated event, such as mechanical breakdown of equipment or an unseasonable rainstorm. Because of the short period of storage allowed by this General Order, the stockpiled biosolids are not a threat to the quality of underlying ground water; thus, the storage basins need not be regulated as either a waste pile or surface impoundment under Title 27 of the CCR. If long-term storage is proposed, the discharger will need to apply for a separate WDR for the long-term biosolids storage facility. Biosolids application to land associated with a project using a permitted long-term biosolids storage basin may be conducted under this General Order, if appropriate.

21. Ground water and surface waters of California have been evaluated for their maximum potential beneficial uses. Those use categories are discussed below:

a. The designated beneficial uses of surface waters within the State are:

- (1) Municipal Supply (MUN)
- (2) Agricultural Supply (AGR)
- (3) Aquaculture (AQUA)
- (4) Fresh Water Replenishment of Salton Sea (FRSH)
- (5) Industrial Service Supply (IND)
- (6) Ground Water Recharge (GWR)
- (7) Water Contact Recreation (REC I)
- (8) Noncontact Water Recreation (REC II)
- (9) Warm Water Habitat (WARM)
- (10) Cold Freshwater Habitat (COLD)
- (11) Wildlife Habitat (WILD)
- (12) Hydropower Generation (POW)
- (13) Preservation of Rare, Endangered, or Threatened Species (RARE)

b. The designated beneficial uses of ground waters in California are:

- (1) MUN
- (2) IND(3) AGR
- (4) AQUA
- (5) WILD

Some ground water and surface waters have fewer beneficial uses. Beneficial uses for specific water bodies can be found in the applicable RWQCB's Water Quality Control Plan (Basin Plan).

22. On \_\_\_\_\_, in accordance with CEQA (PRC, Section 21000, et seq.), the SWRCB adopted a Mitigated Environmental Impact Report No. \_\_\_\_\_ for these General WDRs.

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23. The SWRCB has notified all known interested agencies and persons of its intent to prescribe General WDRs for the reuse of biosolids as a soil amendment and has provided them with an opportunity for a public hearing and an opportunity to submit comments.
24. The SWRCB, in a public meeting on \_\_\_\_\_, heard and considered all comments pertaining to the General Order.

**IT IS HEREBY ORDERED** that all dischargers that file an NOI indicating their intention to be regulated under provisions of this General Order, and all heirs, successors, or designees, in order to meet the provisions contained in Division 7 of CWC and regulations adopted thereunder, shall comply with the following:

### A. PROHIBITIONS

1. The discharge of biosolids is prohibited unless the discharger has submitted an NOI, filing fee, and a pre-application report and in response to these submittals, the RWQCB has issued a Notice of Applicability, individual WDRs, or a waiver of WDRs for the discharge.
2. Applications of biosolids shall be confined to the designated use areas stated and shown in the NOI and pre-application report.
3. The discharge shall not cause or threaten to cause pollution, as defined in CWC section 13050.
4. The application of any material that results in a violation of the Safe Drinking Water and Toxic Enforcement Act (Health and Safety Code section 25249.5) is prohibited.
5. The storage, transport, or application of biosolids shall not cause a nuisance, as defined in CWC section 13050.
6. There shall be no discharge of biosolids from the storage or application areas to adjacent land areas not regulated by this General Order, to surface waters, or to surface water drainage courses.
7. From the permitted site, irrigation water runoff is prohibited for 30 days after application of biosolids if vegetation in the application area and along the path of runoff does not provide 33 feet of unmowed grass or similar vegetation to prevent the movement of biosolids from the application site.

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8. Application of biosolids at rates in excess of the nitrogen requirements of the vegetation or at rates that would degrade ground water is prohibited except as allowed by Prohibition A.9.
9. Application of biosolids at rates in excess of the nitrogen requirements of the vegetation may be allowed for soil reclamation projects (as defined by land reclamation on page 7) as part of an overall plan for reclamation of sites (such as abandoned mine tailings and gravel quarries), provided the discharger can demonstrate that the application of excess nitrogen will not result in unacceptable degradation of underlying ground waters. A report prepared by a Certified Agronomist, Certified Soil Scientist, Registered Agricultural Engineer, or Registered Civil Engineer providing this demonstration shall be submitted to and approved by the RWQCB Executive Officer prior to the application of biosolids to reclamation sites at greater than agronomic rates.
10. The discharge of biosolids except as allowed for authorized storage, processing, and application sites is prohibited.
11. The application of "hazardous waste," as defined in Chapter 11, Division 4.5, Title 22 of the CCR, is prohibited.
12. Discharge of biosolids with pollutant concentrations greater than those shown below is prohibited.

	<u>Ceiling Concentration</u>
<u>Constituent</u>	<u>mg/kg dry weight</u>
Arsenic	75
Cadmium	85
Copper	2,500
Lead	350
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

13. The application of biosolids to water-saturated or frozen ground or during periods of precipitation that induces runoff from the permitted site is prohibited.
14. The application of biosolids containing a moisture content of less than

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50 percent is prohibited. .

15. The application of biosolids in areas where biosolids are subject to gully erosion or washout off site is prohibited.
16. The application of biosolids to slopes exceeding 25 percent is prohibited.

### B. DISCHARGE SPECIFICATIONS

1. All biosolids subject to this General Order shall comply with the applicable pathogen reduction standards listed in 40 CFR Part 503.32. In addition to those standards, all biosolids meeting Class A standards shall not have a maximum fecal coliform concentration greater than 1,000 most probable number (MPN) per gram of biosolids; or the density of salmonella, sp.<sup>2</sup> shall not be greater than three MPN per four grams.
2. All biosolids subject to this order shall comply with one of the applicable vector attraction reduction requirements specified in 40 CFR Part 503.33.
3. Biosolids application rates shall not exceed the agronomic rate for nitrogen for the crop being planted except as allowed by Prohibition No. 9 or for biosolids research projects.
4. Biosolids shall not be applied in amounts exceeding the Risk Assessment Acceptable Soil Concentration as described below:

$$BC = RP - 1.78(BS)$$

Where: BC = Background Cumulative Adjusted Loading Rate (Lbs./Acre)  
RP = 40 CFR Part 503 Cumulative Pollutant Loading Rate (Lbs./Acre)  
BS = Actual Site Background Site Soil Concentration (mg/Kg)

And Where the Values for RP on a pollutant specific basis are given below:

Pollutant	Cumulative Pollutant Loading Rate (RP) (Lbs./Acre)
Arsenic	36
Cadmium	34

<sup>2</sup> As determined by a USEPA approved method other than a method listed in "Standard Methods for the Examination of Water and Wastewater" 18<sup>th</sup> Edition, 1992, American Public Health Association, 1015 15<sup>th</sup> Street, NW., Washington, DC 20005; and other than the method found in Kenner, B. A. and H. P. Clark, "Detection and Enumeration of Salmonella and Pseudomonas aeruginosa," Journal of Water Pollution Control Federation, Vol. 46, No. 9, September 1974, pp. 2163-2171. Water Environment Federation, Water Environment Federation, 601 Wythe Street, Alexandria, VA 22314.



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Copper	1336
Lead	267
Mercury	15
Molybdenum	16
Nickel	374
Selenium	89
Zinc	2,494

5. If biosolids are applied to a site where the soil will be tilled, biosolids shall be incorporated within 24 hours after application in arid areas and within 48 hours in non-arid areas. Tillage practices shall be used which minimize the erosion of soils from the application site by wind, storm water, or irrigation water.
6. If biosolids are applied to ground surfaces having a slope greater than ten percent (10%) or if required by the RWQCB Executive Officer, a report, including an erosion control plan, shall be prepared by a Certified Soil Scientist, Certified Agronomist, Registered Agricultural Engineer, Registered Civil Engineer, or a Certified Professional Erosion and Sediment Control Specialist and submitted to the RWQCB for approval with the NOI. This report shall describe the site conditions that justify application of biosolids to the steeper slopes and shall specify the application and management practices necessary (a) to assure containment of the biosolids on the application site and (b) to prevent soil erosion.
7. Structures conveying tail water shall be designed and maintained to minimize any field erosion. Tail water structures shall be boarded and wrapped with plastic prior to any biosolids application but removed after biosolids incorporation into the soil.
8. Biosolids distinguished as "Class B" in 40 CFR Part 503 must comply with the following:
  - a. The discharge of tail water or field runoff is prohibited within 30 days after application of biosolids for areas where biosolids have not been incorporated into the soil and where there is not a minimum of 33 feet of unmowed grass or similar vegetation bordering the application area and along the path of runoff to prevent movement of biosolids particles from the application site.
  - b. After an application of biosolids in any field, the discharger shall ensure the following:
    - (1) For at least 30 days:
      - (a) Public access to the application sites is restricted for sites with a low potential for public exposure;
      - (b) Food, feed, and fiber crops are not harvested; and
      - (c) Animals are not grazed.

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(2) For at least 12 months:

- (a) Public access to the site is restricted for sites with a high potential for public exposure;
- (b) Turf is not to be harvested if the harvested turf is placed on land with a high potential for contact by the public as defined in 40 CFR Part 503.11; and
- (c) Grazing of milking animals used for producing unpasteurized milk for human consumption is prevented if the field is used as pasture.

(3) For at least 14 months:

Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface are not harvested.

(4) For at least 20 months:

Food crops with harvested parts below the land surface are not harvested when the biosolids remain exposed on the surface for four months or longer prior to incorporation.

(5) For at least 38 months:

Food crops with harvested parts below the land surface are not harvested when the biosolids remained exposed on the ground surface for less than four months prior to incorporation into the soil.

9. Staging and biosolids application areas shall be at least:

- a. 10 feet from property lines,
- b. 500 feet<sup>3</sup> from domestic water supply wells,
- c. 100 feet<sup>4</sup> from non-domestic water supply wells,
- d. 50 feet from public roads and occupied onsite residences<sup>5</sup>,
- e. 100 feet from surface waters<sup>6</sup>, including wetlands, creeks, ponds, lakes, underground aqueducts, and marshes,

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<sup>3</sup> For sites where the topography slopes are greater than 10 percent, the minimum width of vegetative border shall be proposed in accordance to Discharge Specification No. 6 above.

<sup>4</sup> A lesser setback distance from domestic supply wells (not to be less than 100 feet) may be used if the discharger can demonstrate to the Executive Officer that the ground water, geologic, topographic, and well construction conditions at the specific site are adequate to protect the health of individuals using the supply well.

<sup>5</sup> A lesser setback distance (not to be less than 25 feet) may be used if the discharger can demonstrate to the RWQCB Executive Officer that the ground water, geologic, topographic, and well construction conditions at the specific site are adequate to protect the ground water. Not including agricultural drains.

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- f. 33 feet from primary agricultural drainage ways,
- g. 500<sup>7</sup> feet from occupied non-agricultural buildings and off-site residences,
- h. 400 feet from a domestic water supply reservoir,
- i. 200 feet from a primary tributary to a domestic water supply, and
- j. 2,500 feet from any domestic surface water supply intake.

### C. BIOSOLIDS STORAGE AND TRANSPORTATION SPECIFICATIONS

Biosolids shall be considered to be “stored” if they are placed on the ground or in non-mobile containers (i.e., not in a truck or trailer) at the application site or an intermediate storage location away from the generator/processing for more than 48 hours. Biosolids shall be considered to be “staged” if placed on the ground for brief periods of time solely to facilitate transfer of the biosolids between transportation and application vehicles.

- 1. Biosolids shall not be stored for more than seven (7) consecutive days prior to application.
- 2. Biosolids containing free liquids shall not be placed on the ground prior to application on an approved site, excluding equipment cleaning operations.
- 3. Biosolids shall not be stored directly on the ground at any one location for more than seven (7) consecutive days.
- 4. Sites for the storage of Class B biosolids shall be located, designed, and maintained to restrict public access to the biosolids.
- 5. Biosolids storage facilities that contain biosolids between October 1 and April 30 shall be designed and maintained to prevent washout or inundation from a storm or flood with a return frequency of 100 years.
- 6. Biosolids placed on site for more than 24 hours shall be covered.
- 7. Biosolids storage facilities shall be designed, maintained, and operated to minimize the generation of leachate and the effects of erosion.
- 8. If biosolids are to be stored at the site, a plan describing the storage program and means of complying with this General Order shall be submitted for RWQCB Executive Officer approval with the NOI. The storage plan shall also include an adverse weather plan.

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<sup>6</sup> Applies to biosolids storage facilities at the reuse site, not biosolids storage facilities which are part of a wastewater treatment plant or which are covered by separate WDRs.

<sup>7</sup> Applications in a such proximity to on site residences must be approved by the resident.

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9. The discharger shall operate the biosolids storage facilities in accordance with the approved biosolids storage plan.
10. The discharger shall immediately remove and relocate any biosolids stored or applied on site in violation of this General Order.
11. All biosolids shall be transported in covered vehicles capable of containing the designated load.
12. All biosolids having a water content that is capable of leaching liquids shall be transported in leak proof vehicles.
13. Each biosolids transport driver shall be trained as to the nature of its load and the proper response to accidents or spill events and shall carry a copy of an approved spill response plan.

### D. PROVISIONS

1. To obtain coverage under this General Order and terminate coverage thereof, the following must take place:

- a. Coverage:

A complete NOI form and filing fee must be filed by the discharger for each proposed application site covered by these General WDRs. The NOI form may be modified by the RWQCB Executive Officer as the need arises. An NOI form is attached (Attachment A) to this General Order. Coverage does not begin until a Notice of Applicability has been issued by the applicable RWQCB's Executive Officer. No discharge shall occur until 15 days after submission of the Pre-Application Report as required in the Monitoring and Reporting Program.

- b. Coverage Termination:

- (1) A biosolids application project covered by these General WDRs may be terminated by submittal of the Final Monitoring and Reporting Program technical report and an NOT, as shown on Attachment B of these General WDRs. The discharger(s) will be responsible for paying all annual fees for coverage under these General WDRs until approval of the NOT is granted by the RWQCB Executive Officer. For sites using Class B biosolids, termination shall not take place until 38 months after the last Class B biosolids application. The NOT form may be modified by the RWQCB Executive Officer as the need arises.

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- (2) If an individual WDR Order is issued to the discharger for a project covered by this General Order, the applicability of this General Order to the discharger is automatically terminated on the effective date of the individual WDR Order.
2. Where ground water monitoring is required, as specified by the RWQCB Executive Officer or as contained in Monitoring and Reporting Program, the ground water monitoring program must be in place prior to any application of biosolids.
3. The discharger shall submit copies of each NOI to the appropriate regional office(s) of the Department of Fish and Game, local water district, City Planning Department, County Health Department(s), County Planning Department(s), and County Agricultural Commissioner(s) with jurisdiction over the proposed application site(s). Also, the discharger shall notify adjacent property owners with parcels abutting the subject land application site and, where applicable, tenants. The discharger shall submit proof to the RWQCB that all the above agencies and persons were notified. Other than compliance evaluations, the RWQCB is not responsible for the notification process.
4. The discharger shall comply with the Monitoring and Reporting Program No. 2000- which is part of this General Order and any plans required and contained within, and any revisions thereto.
5. The discharger must notify the RWQCB Executive Officer in writing at least 30 days in advance of any proposed transfer of this General Order's responsibility and coverage to a new discharger. The notice must include a new NOI for the proposed discharger, an NOT for the existing discharger, and a specific date for the transfer of this General Order's responsibility. This agreement shall include an acknowledgment that the existing discharger is liable for compliance with this General Order and for all violations up to the transfer date and that the new discharger is liable for compliance with this General Order and all violations after the transfer date.
6. Where the discharger becomes aware that it failed to submit any relevant facts in an NOI or submitted incorrect information in an NOI or in any report to the RWQCB, it shall promptly submit such facts or information.
7. The discharger shall be responsible for informing all biosolids transporters, applicators, and growers using the site of the conditions contained in this General Order.
8. The discharger must comply with all conditions of this General Order, including timely submittal of technical and monitoring reports as directed by the RWQCB Executive Officer. Violations may result in enforcement action, including RWQCB or court orders requiring corrective action or imposing civil monetary liability or revision or rescission of the applicability of this General Order to a specific project.

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9. Individuals and companies responsible for site operations retain primary responsibility for compliance with these requirements, including day-to-day operations and monitoring. Individual property owners and property managers retain primary responsibility for crop selection and any access or harvesting restrictions resulting from biosolids application. Individual owners of the real property at which the discharge will occur are ultimately responsible for ensuring compliance with these requirements. Enforcement actions for violations of this General Order may be taken against all dischargers required to comply with this General Order.
10. A copy of this General Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
11. This General Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the discharger from his liability under federal, State, or local laws, nor do they create a vested right for the discharger to continue the waste discharge.
12. Provisions of these WDRs are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.
13. The SWRCB will review this General Order periodically and will revise requirements when necessary.
14. The discharger at all times shall properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this General Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this General Order.
15. The discharger shall allow the RWQCB or an authorized representative upon the presentation of credentials, valid identification with photograph, and other documents as may be required by law to:
  - a. Enter upon the discharger's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this General Order;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this General Order;

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- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this General Order; and
  - d. Sample or monitor at reasonable times, any substances or parameters at any location for the purposes of assuring compliance with this General Order or as otherwise authorized by the CWC.
16. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All measurement devices shall be calibrated at least once per year or more frequently to ensure continued accuracy of the devices.

Unless otherwise permitted by the RWQCB Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services. The RWQCB Executive Officer may allow use of any uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore is not subject to certification. All analyses shall be conducted in accordance with those methods specified in 40 CFR Part 503.8(1) through 40 CFR Part 503.8(4), 40 CFR Part 503.8(6), and 40 CFR Part 503.8(7).

17. The discharger shall report any noncompliance which may endanger human health or the environment. Any such information shall be provided orally to the RWQCB Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain (a) a description of the noncompliance and its cause; (b) the period of noncompliance, including exact dates and times; and, (c) if the noncompliance has not been corrected, the anticipated time the noncompliance is expected to continue and steps being taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance with a time schedule that includes milestone dates. The RWQCB Executive Officer or an authorized representative may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. Also, the discharger shall notify the Office of Emergency Services (1-800-852-7550), the State Department of Health Services, Food and Drug Branch, (916) 445-2263, and the local health department as soon as practical but within 24 hours after the incident.
18. The discharger shall retain records of all monitoring information including all calibration and maintenance records for on-site monitoring equipment (if applicable), copies of all reports required by this General Order, and records of all data used to complete the application for this General Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may

## 2000 General Order

be extended during the course of any unresolved litigation regarding this discharge or when requested by the RWQCB Executive Officer.

Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements;
  - b. The individual(s) who performed the sampling or measurements;
  - c. The date(s) analyses were performed;
  - d. The individual(s) who performed the analyses;
  - e. The analytical techniques or methods used; and
  - f. The results of such analyses.
19. All application reports or information to be submitted to the RWQCB Executive Officer shall be signed and certified as follows:
- a. For a corporation--by a principal executive officer or at least the level of vice president.
  - b. For a partnership or sole proprietorship--by a general partner or the proprietor, respectively.
  - c. For a municipality, State, federal, or other public agency--by either a principal executive officer or ranking elected official.
20. A duly authorized representative of a person designated in Provision No. 19 of this provision may sign documents if:
- a. The authorization is made in writing by a person described in Provision No. 19, above.
  - b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
  - c. The written authorization is submitted to the RWQCB Executive Officer.

Any person signing a document under these Provisions shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”



## 2000 General Order

### CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on \_\_\_\_\_.

AYE:

NO:

ABSENT:

ABSTAIN:

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Maureen Marché  
Administrative Assistant to the Board

STATE WATER RESOURCES CONTROL BOARD  
MONITORING AND REPORTING PROGRAM NO. 2000-DWQ  
GENERAL WASTE DISCHARGE REQUIREMENTS (WDRs) FOR THE  
DISCHARGE OF BIOSOLIDS TO LAND FOR USE IN AGRICULTURAL,  
SILVICULTURAL, HORTICULTURAL, AND LAND RECLAMATION ACTIVITIES

**PRE-APPLICATION REPORT**

As required in Provision 1.a. of the General Order, a Pre-Application Report shall be submitted for each field or distinct application area prior to the application of biosolids in accordance with the WDRs. Where biosolids are applied on a continuing basis to a single area, the Pre-Application Report may cover ongoing operations and may not need to be submitted for each load applied. A pre-application report should be submitted 15 days prior to the date of the proposed application. The Pre-Application Report shall be signed by the owner/operator of the biosolids application operation and by the property owner. The property owner may submit written authorization to allow a representative of the property owner, such as a tenant or land management company, to sign the Pre-Application Report.

Information in the Pre-Application Report found in **bold type** is a required field to be submitted in the Pre-Application Report. Otherwise, information that was submitted in the Notice of Intent (NOI) and has not changed or will not change is not required. The following items shall be included in the Pre-Application Report and shall be submitted to the appropriate Regional Water Quality Control Board (RWQCB):

**Waste Discharge Identification System No.**\_\_\_\_\_

This number is established at the time the initial Notice of Intent (NOI) is submitted to the RWQCB and can be obtained at the RWQCB.

1. **Site Location/Applier Information-**A separate Pre-Application Report must be completed for each different site.

<b>Landowner:</b>	
<b>Address:</b>	
<b>Contact:</b>	<b>Phone:</b>
<b>Site Location (including address, if any):</b>	
<b>Nearest Cross Street(s):</b>	
<b>County:</b>	<b>Total Size of Site</b>
<b>Section(s)/Township/Range/Meridian:</b>	
<b>Latitude (from field center):</b>	<b>Longitude (from field center):</b>

<b>Applier</b>	
<b>Address:</b>	
<b>Contact:</b>	<b>Phone:</b>

Attach a U.S. Geological Survey 7.5 Minute map or similar map (1:24000 or larger) showing the proposed application site and surrounding properties within 2,500 feet from site boundaries. The map should show:

- a. Site topography
  - b. Run-on/runoff controls
  - c. Storage areas
  - d. Nearby surface waters, wells, residences, and public roads
  - e. Application area(s) including buffer zones (setbacks)
  - f. Ground water monitoring wells (if required)
  - g. Elevation
2. **Biosolids Source--** The section below must be completed **for each source of biosolids**. If additional space is required, copy this section and attach.

<b>Wastewater Treatment Plant</b>				
<b>Mailing Address</b>				
<b>City</b>	<b>County</b>	<b>Zip</b>	<b>State</b>	<b>Phone</b>
<b>Contact Person</b>				

**Level of Pathogen Treatment:** Class A \_\_\_\_\_ Class B \_\_\_\_\_

**Description of vector attraction reduction achievement:**

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3. **Constituent Concentrations (Each Source)**

Constituent	Concentration in Biosolids, mg/kg, dry weight	
Arsenic		
Cadmium		
Copper		

<b>Constituent</b>	<b>Concentration in Biosolids, mg/kg, dry weight</b>	
<b>Lead</b>		
<b>Mercury</b>		
<b>Molybdenum</b>		
<b>Nickel</b>		
<b>Selenium</b>		
<b>Zinc</b>		
<b>pH</b>		
<b>Salinity</b>		
<b>Total Solids Content</b>	<b>%</b>	
<b>Total Nitrogen</b>		
<b>Fecal Coliform (if applicable)</b>	<b>MPN/gram</b>	
<b>Ammonia Nitrogen, as N</b>		
<b>Total Phosphorus, as P</b>		
<b>Total Potassium</b>		
<b>SW 846<sup>1</sup> Method 8080 for PCB Aroclors, Aldrin/Dieldrin</b>		
<b>EPA Method 8270 Semi-Volatile Organics</b>		

Date samples collected \_\_\_\_\_  
 Date samples analyzed \_\_\_\_\_  
 Attach copies of all lab reports.

#### 4. Application Area Information

<b>Subject</b>	<b>Value</b>	<b>Applicable Unit/ Type of Measure</b>
<b>Quantity of Biosolids to be Applied</b>		
<b>Land Use Zone</b>		
<b>Adjacent Land Use Zones</b>		
<b>Application Area Size</b>		Acres
<b>Proposed Nitrogen Loading</b>		Lb. plant available nitrogen/acre
<b>Residual Nitrogen from</b>		Lb. per acre

<sup>1</sup> The Discharger shall use the most recent version of SW 486 methods for detecting PCB constituents and list all Aroclor concentrations with the summation of total PCBs.

Subject	Value	Applicable Unit/ Type of Measure
Previous Fertilizer and Biosolids Applications <sup>2</sup>		
Proposed Crop, Use		Crop type, human/animal/neither
Crop Nitrogen Usage		Lb. nitrogen/acre/year
Nitrogen Usage Reference		
Anticipated Average Application Rate		Dry tons/application
Average Annual Precipitation		Inches/year

Attach an anticipated annual time schedule for the field operations including anticipated biosolids applications windows, seeding operations, supplemental fertilization, and cultivation/harvest.

## 5. Ground Water Monitoring

For biosolids application operations where minimum depth to usable ground water<sup>3</sup> is less than 25 feet or as specified by the RWQCB Executive Officer and where special circumstances would warrant ground water monitoring, a ground water monitoring program, at a minimum, shall consist of three monitoring wells (one up gradient, two down gradient) for each application area and shall be in place prior to any application of biosolids if the discharger intends to or does apply biosolids more than twice within a five-year period at any particular location. A report specifying location, construction, and development details of ground water monitoring wells shall be submitted to the RWQCB for approval by the RWQCB Executive Officer prior to the installation. In addition, a mean sea level (MSL) reference elevation shall be established for each well in order to determine water elevations. The RWQCB Executive Officer, after reviewing the information submitted, may waive this requirement if it is determined that the benefit of such monitoring is not commensurate to the level of protection.

Results shall be submitted to the RWQCB 30 days prior to any biosolids application at each site and annually thereafter. Samples shall be collected from each of the monitoring wells annually and shall be analyzed for the following parameters:

<u>Parameter</u>	<u>Units</u>
Static Water Level	feet (MSL)
Total Dissolved Solids	mg/L

<sup>2</sup> Attach a sheet showing calculations and all assumptions used for calculating residual Nitrogen from previous fertilizer and biosolids applications.

<sup>3</sup> Usable ground water: Ground water is defined as having either an agricultural or domestic supply source as described in the RWQCB Basin Plan.

Sodium	mg/L
Chloride	mg/L
Nitrate	mg/L as N
Total Nitrogen	mg/L as N
pH	pH units

Initial testing shall also include the following parameters:

Arsenic	mg/L
Cadmium	mg/L
Copper	mg/L
Lead	mg/L
Mercury	mg/L
Molybdenum	mg/L
Nickel	mg/L
Selenium	mg/L
Zinc	mg/L

6. Biosolids Storage Plan (as required by Storage and Transportation Spec. No. 8) A biosolids storage plan must be attached (even if no *on-site* biosolids storage will be provided). The biosolids storage plan should include at a minimum:

If on-site storage will be provided:

- a. Size of biosolids storage area
- b. How frequently it will be used (emergency basis only or routine use)
- c. Leachate controls
- d. Erosion controls
- e. Run-on/runoff controls

If no on-site storage will be provided:

- a. Location of off-site storage facilities
- b. Emergency storage plans

**7. Erosion Control Plan (as required by Discharge Specification No. 6))**

Biosolids applied to ground surfaces having a 10 percent or greater slope requires an Erosion Control Plan. The Plan should outline conditions that justify application of biosolids to the 10 percent or greater slopes and specify the application and management practices to be used to assure containment of the biosolids on the application site.

**8. Spill Response and Traffic Plan (as required by Biosolids Storage and Transportation Specification No. 13)**

- a. The Spill Response Plan should include at a minimum:
  - (1) Emergency contacts and notification procedures
  - (2) Personal protective equipment requirements.
  - (3) Response instructions for spill during biosolids transport.
  - (4) Response instructions for storage facility failure.
  - (5) Response instructions if hazardous or other unauthorized material is found.
- b. The Traffic Plan should include at a minimum:
  - (1) The proposed route for all vehicles handling biosolids.
  - (2) The anticipated maximum vehicle weight.

9. **Adverse Weather and Alternative Plan**

Submit an Adverse Weather and Alternative Plan that details procedures to address times when biosolids cannot be applied to the site(s) due to adverse weather or other conditions (wind, precipitation, field preparation delays, access road limitations, etc.).

## ANNUAL REPORTING

### 1. **Ground Water Monitoring** (if required in the Pre-Application Report)

Samples shall be collected from each of the monitoring wells annually and shall be analyzed for the following parameters:

<u>Parameter</u>	<u>Units</u>
Static Water Level	feet (MSL)
Total Dissolved Solids	mg/l
Sodium	mg/l
Chloride	mg/l
Nitrate	mg/l as N
Total Nitrogen	mg/l as N
pH	pH units

### 2. **Application Information**

Quantity of Biosolids Applied		Dry tons
Application Area Size		Acres
Total Nitrogen Concentration in Biosolids		mg/kg
Nitrogen Loading		Lb. plant avail. Nitrogen per acre
Residual Nitrogen <sup>4</sup>		Lbs. per acre
Crop		
Amount of Crop Produced		Specify units

### 3. **Pollutant Loadings for Each Application Site**

Pollutant	Total Loadings from Previous Years (kg/ha)	Loading This Year (kg/ha)	Background Soils Conc. (kg/ha) (6" depth)	Cumulative Metal Load to Date (kg/ha)	Percent Cumulative Limit to Date
Arsenic					
Cadmium					
Copper					

<sup>4</sup> Attach a sheet showing calculations and all assumptions used for calculating residual nitrogen from previous fertilizer and biosolids applications.



Pollutant	Total Loadings from Previous Years (kg/ha)	Loading This Year (kg/ha)	Background Soils Conc. (kg/ha) (6" depth)	Cumulative Metal Load to Date (kg/ha)	Percent Cumulative Limit to Date
Lead					
Mercury					
Molybdenum					
Nickel					
Selenium					
Zinc					

#### 4. Constituent Concentrations (Each Source)

Constituent	Concentration in Biosolids, (mg/kg, dry weight)
Arsenic	
Cadmium	
Chromium	
Copper	
Lead	
Mercury	
Molybdenum	
Nickel	
Selenium	
Zinc	
Total Solids Content	%
Total Nitrogen	
Fecal Coliform	MPN/gram
Ammonia Nitrogen, as N	
Total Phosphorus, as P	
Total Potassium	
SW 846 <sup>5</sup> Method 8080 for PCB Aroclors, Aldrin/Dieldrin	
EPA Method 8270 Semi- Volatile Organics	

<sup>5</sup> The discharger shall use the most recent version of SW 486 methods for detecting PCB constituents and list all Aroclor concentrations with the summation of total PCBs.

5. **Site Map**

Provide a site map identifying the area(s) of application clearly showing each field to which biosolids have been applied and crop planted.

6. **40 CFR Part 503**

Attach a copy of the generator's monitoring report for compliance with the 40 CFR Part 503.

## GENERAL REPORTING

1. Pre-Application Reports shall be submitted for RWQCB staff review and approval at least 30 days prior to application of biosolids. Annual Reports covering the period between January 1 to December 31 shall be submitted by February 15 of the following year. If no applications occurred during the year, the discharger shall submit a report indicating that no discharge occurred during the year.
2. The collection, preservation, and holding times of all samples shall be in accordance with U.S. Environmental Protection Agency approved procedures. All analyses shall be conducted by a laboratory certified by the California Department of Health Services to perform the required analyses. The RWQCB Executive Officer may allow use of an uncertified laboratory in accordance with Provision No. 16.
3. If there is no discharge during a required reporting period, the discharger shall submit a letter report to the RWQCB indicating that there has been no activity during the required reporting period.
4. Each report shall be signed and contain the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment”
5. A duly authorized representative of the discharger may sign the documents if:
  - a. The authorization is made in writing by the person described above;
  - b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and
  - c. The written authorization is submitted to the RWQCB Executive Officer.
6. The discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with waste discharge requirements.

7. Report immediately (within 24 hours) to the RWQCB Executive Officer and Director of County Environmental Health by telephone with a follow-up letter any discharge which threatens the environment or human health. During non-business hours, report to the Office of Emergency Services by telephone at 1-800-852-7550.
8. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the RWQCB.

### **CERTIFICATION**

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on \_\_\_\_\_.

AYE:

NO:

ABSENT:

ABSTAIN:

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Maureen Marché  
Administrative Assistant to the Board